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**Background Comments to the Blue Ribbon Commission on
America's Nuclear Future**

My comments may repeat some points already presented to the Commission, but they are worth repeating because their importance means they cannot be overemphasized. Also, as a teacher it is clear to me that learning takes place best when it comes from many points of light.

Common Ground:

- It is now well established that high-level nuclear waste (HLW) is perceived by citizens to be one of the most dreaded technological risks facing the nation. In scientific survey after survey nuclear waste rises to the top when compared to the risks of virtually all other technological risks. And a failure to solve the waste disposal

problem has for decades been seen as the Achilles heel of commercial nuclear power. Hence, the future of nuclear power in America is deeply tied to resolving the waste challenge.

Key Constraints:

- Equally well established is the role of trust in risk perceptions.

Over and over again the perception of risk is shown to be shaped by the trust that citizens have of the institutions or agencies responsible for the management of risks. For example, the perceived level of nuclear risk is high and nearly identical between Americans and the French. However, the French are much more supportive of nuclear power, why? It is because they have high levels of trust in their nuclear agencies. Where trust is low, risks are perceived as high. The agencies and management process in the U.S. are mistrusted. And the risks associated with nuclear wastes are particularly dreaded. Therefore, a context of amplified risk deepens considerably the challenge of managing nuclear wastes—one of the most difficult policy challenges facing this and all other nuclear nations.

- None of the major institutions in the United States (e.g. Congress, the Executive, Labor, Media, etc.) attract majority confidence from the American public. And specific agencies responsible for HLW management, the Department of Energy and the Nuclear Regulatory Commission evidence shows, are mistrusted particularly. Furthermore, there is often a mistrust of the science and technical base for policy decisions.
- There is now an unequivocal consensus among social scientists and knowledgeable policy observers that the regaining of trust is an essential feature of a successful waste management program. This means that a successful HLW program will need to devote and support as much attention to social, institutional, and political issues—to demonstrate sincerity, competency, and fiduciary responsibility—as to technological concerns.
- There is an obdurate asymmetry where it is much easier to lose trust than to regain it, once lost. Hence, it is unlikely that mistrusted agencies will be trusted soon. This means that the

development of a waste management program in America will need to proceed in a context of mistrust, but at the same time be mindful of the need to act persistently in trustworthy ways.

- It is important to recognize that it is not necessary to garner categorical, uncritical trust in management agencies or in the management process. Science is built upon a principle of disciplined skepticism activated through an institutionalized peer review system. Democracy, too, is built upon a principle of criticism and debate, though less formalized than science. Hence, the goal is to elevate the level of citizen and stakeholder trust within the constraints identified by science and engineering, while permitting and encouraging what some researchers call “critical trust” —thereby providing a balanced perspective between trust and skepticism.
- Trust is a two-way street. While much has been researched and written about one direction—the importance of trust by citizens of experts, of agencies, and of process—virtually nothing has been written about the other direction. There is reason to believe that

mistrust travels in the other direction, too. But we have very little systematic knowledge about how experts and agencies view publics and of democratic processes. To the extent that experts and other agency officials view citizens as too uninformed to make thoughtful judgments, or view open, democratic processes inappropriate for policies involving complex technologies, the chances of regaining trust are all but dashed. Simply going through the motions of democracy will very likely be counterproductive.

Public-Stakeholder-Engagement:

- There is widespread agreement that successful HLW programs will require open, transparent, public-stakeholder-engagement processes. Many mechanisms are being tested at home and abroad for the conduct of such processes. Which one to choose? The answer to this question lies first in an orientation. Rather than committing to any one method or a particular hybrid, the orientation should be one of a willingness to experiment. We should systematically examine multiple approaches.

- Second, the most appropriate method lies in an analytic strategy.

A disciplined comparison should be made of the types of public engagement techniques being tried in a variety of countries, with an assessment of their successes or failures. We should also perform a disciplined comparison of siting processes for non-nuclear, noxious substances in the U.S. While some international comparisons are available now, their applicability to the American context is limited. First, they seldom take note of the differences in political systems (e.g. federalist versus unitary style democracies). They fail to note distinct differences in history and culture they fail to distill generic lessons from particular ones that are applicable to the host country only. We need to mine these experiences much more carefully.